

WE CLAIM:

*Sub B1*  
1. A method of establishing restorable paths in an information network in response to arriving traffic requests, the network having a number of nodes and links between corresponding pairs of nodes, comprising:

receiving requests at a first node of the network for transmission of traffic to a second node of the network, wherein a given request specifies a desired transmission bandwidth for an active path and a backup path to be established between the first and the second nodes;

distributing information to nodes in the network concerning (a) total bandwidth reserved by each link in the network for all active paths currently defined in the network, and (b) total bandwidth reserved by each link in the network for all backup paths currently defined in the network;

identifying potential active links in the network for an active path in response to a given request, wherein the potential active links each have an available bandwidth at least equal to the bandwidth specified by the given request;

identifying potential backup links in the network for a backup path for restoring the active path, wherein the potential backup links each have an available bandwidth at least equal to the desired transmission bandwidth specified by the given request; and

formulating an active and a backup path for each given request from among the potential active links and the potential backup links identified in response to the given request.

2. The method of claim 1, including determining the available bandwidth of a potential backup link having a certain total bandwidth capacity, by subtracting from the total bandwidth capacity (a) the total bandwidth reserved by the link for all current active paths through the link, and (b) the total bandwidth reserved by the link for all current backup paths through the link.

3. The method of claim 1, including defining each ~~backup path in the network to be completely link disjoint from~~ its corresponding active path.

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